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**MAIL STOP PCT**

Docket No. 293065US0PCT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION OF: Anna QUATTROPANI, et al.

SERIAL NO: 10/585,635

GAU:

FILED: July 11, 2006

EXAMINER:

FOR: THIAZOLE DERIVATIVES AND USE THEREOF

**INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97**COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

**REFERENCES**

- The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**RELATED CASES**

- Attached is a list of applicant's pending application(s), published application(s) or issued patent(s) which may be related to the present application. In accordance with the waiver of 37 CFR 1.98 dated September 21, 2004, copies of the cited pending applications are not provided. Cited published and/or issued patents, if any, are listed on the attached PTO form 1449.
- A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**CERTIFICATION**

- Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

**DEPOSIT ACCOUNT**

- Please charge any additional fees for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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OCT 11 2006

SHEET 1 OF 3

Form PTO 1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE			CATTY DOCKET NO. 293065US0PCT		SERIAL NO. 10/585,635	
LIST OF REFERENCES CITED BY APPLICANT		APPLICANT						
		Anna QUATTROPANI, et al.						
		FILING DATE July 11, 2006			GROUP			
U.S. PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE	
	AA							
FOREIGN PATENT DOCUMENTS								
		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES                  NO			
	AB	00 75120	12-14-00	WO (equivalent of US 2002025976)			NO	
	AC	03 072557	09-04-03	WO (equivalent of US 2005119320)			NO	
	AD	01 44217	06-21-01	WO (equivalent of US 6262096, US 2002072609, US 2002099217, US 2003216440, US 6214852, US 2004063767 and US 6515004)			NO	
	AE	1 256 578	11-13-02	EP (equivalent of US 2003078252 and US 2004192746)			NO	
	AF	00 26202	05-11-00	WO			NO	
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)								
	AG	WARD, Stephen et al., "Therapeutic Potential of Phosphoinositide 3-Kinase Inhibitors", Chemistry & Biology, Vol. 10, No. 3, pgs. 207-213, 2003.						
	AH	CANTLEY, Lewis C., "The Phosphoinositide 3-Kinase Pathway", Science, Vol. 296, pgs. 1655-1657, 2002.						
	AI	VANHAESEBROECK, Bart et al., "Phosphoinositide 3-Kinases: a Conserved Family of Signal Transducers", TIBS, Vol. 22, No. 2, pgs. 267-272, 1997.						
	AJ	VANHAESEBROECK, Bart et al., "Synthesis and Function of 3-Phosphorylated Inositol Lipids", Annu. Rev. Biochem., Vol. 70, pgs. 535-602, 2001.						
	AK	KATSO, Roy et al., "Cellular Function of Phosphoinositide 3-Kinases: Implications for Development, Immunity, Homeostasis, and Cancer", Annu. Rev. Cell. Dev. Biol., Vol. 17, pgs. 615-675, 2001.						
	AL	TOKER, A., "Phosphoinositides and Signal Transduction", CMSL, Cell Mol. Life. Sci., Vol. 59, pgs. 761-779, 2002.						
	AM	STEIN, Robert C. et al., "PI3-Kinase Inhibition: a Target for Drug Development?", Molecular Medicine Today, Vol. 6, pgs. 347-357, 2000.						
	AN	WYMAN, Matthias P. et al., "Lipids on the Move: Phosphoinositide 3-Kinases in Leukocyte Function", Trends Immunology Today, Vol. 21, No. 6, pgs. 260-264, 2000.						
	AO	HIRSCH, Emilio et al., "Central Role for G Protein-Coupled Phosphoinositide 3-Kinase γ in Inflammation", Science, Vol. 287, pgs. 1049-1053, 2000.						
	AP	HIRSCH, Emilio et al., "Resistance to Thromboembolism in PI3Kγ-Deficient Mice", The FASEB Journal, Vol. 15, pgs. 2019-2021, 2001.						
	AQ	GERARD, Craig et al., "Chemokines and Disease", Nature Immunology, Vol. 2, No. 2, pgs. 108-115, 2001.						
	AR	PARKER, Peter J., "PI 3-Kinase Puts GTP on the Rac", Current Biology, Vol. 5, No. 6, pgs. 577-579, 1995.						
	AS	YAO, Ryoji et al., "Requirement for Phosphatidylinositol-3 Kinase in the Prevention of Apoptosis by Nerve Growth Factor", Science, Vol. 267, pgs. 2003-2006, 1995.						
	AT	PAGES, Francoise et al., "Binding of Phosphatidylinositol-3-OH Kinase to CD28 is Required for T-cell Signalling" Letters to Nature, Vol. 369, pgs. 327-329, 1994.						
	AU	FRASER, James D. et al., "Regulation of Interleukin-2 Gene Enhancer Activity by the T Cell Accessory Molecule CD28", Science, Vol. 251, pgs. 313-316, 1991.						
	AV	LOPEZ-ILASACA, Marco et al., "Phosphoinositide 3-Kinase γ Is a Mediator of Gβγ-Dependent Jun Kinase Activation", The Journal of Biological Chemistry, Vol. 273, No. 5, pgs. 2505-2508, 1998.						
	AW	LAFFARGUE, Muriel et al., "Phosphoinositide 3-Kinase γ Is an Essential Amplifier of Mast Cell Function", Immunity, Vol. 16, pgs. 441-451, 2002.			<input checked="" type="checkbox"/> Additional References sheet(s) attached			
Examiner					Date Considered			
*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.								

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	AX	LAWLOR, Margaret A. et al., "PKB/Akt: a key Mediator of Cell Proliferation, Survival and Insulin Responses?", Journal of Cell Science, Vol. 114, No. 16, pgs. 2903-2910. 2001.			
	AY	STEPHENS, Len et al., Roles of PI3Ks in Leukocyte Chemotaxis and Phagocytosis", Current Opinion in Cell Biology, Vol. 14, pgs. 203-213, 2002.			
	AZ	FRUMAN, David A. et al., "Phosphoinositide Kinases", Annu. Rev. Biochem., Vol. 67. pgs. 481-507, 1998.			
	AAA	THELEN, Marcus et al., "Worthmannin Binds Specifically to 1-Phosphatidylinositol 3-Kinase While Inhibiting Guanine Nucleotide-Binding Protein-Coupled Receptor Signaling in Neutrophil Leukocytes", Cell. Biology, Vol. 91, pgs. 4960-4964, 1994.			
	AAB	GRANT, Steven, "Targeted Therapies in Cancer – Second International Congress", IDrugs, Vol. 6, No. 10, pgs. 946-948, 2003.			
	AAC	WILSON, Kenneth J. et al., "Synthesis of Thiophene-2-Carboxamidines Containing 2-Aminothiazoles and Their Biological Evaluation as Urokinase Inhibitors", Bioorganic & Medicinal Chemistry Letters, Vol. 11, pgs . 915-918, 2001.			
	AAD	BRANDSMA, L. et al., "An Efficient Synthesis of 1,3-Thiazole", Synthesis, pgs. 948-949, 1985.			
	AAE	ALVAREZ-IBARRA, Carlos et al., "A New Synthetic Approximation to Thiazoles With a Versatile Persubstitution and/or Perfunctionalization", Heterocycles, Vol. 32, No. 11, pgs. 2127-2137, 1991.			
	AAF	EL-MAGHRABY, M. A. et al., "Synthesis of New Heterocyclic Sulphonamides", INDIAN, J., Chem., Vol. 20B, pgs. 256-257, 1981.			
	AAG	FELDMEN, Paul L., "Synthesis of the Putative L-Arginine Metabolite L- <sup>NG</sup> - Hydroxyarginine", Tetrahedron Letters, Vol. 32, No. 7, pgs. 875-878, 1991.			
	AAH	FUKATSU, Hiroshi, et al., "Synthesis and Cardiotonic Activity of 5-(2-Substituted Thiazol-4-YL)-2-Pyridones and Thiazolo[4,5-f]Quinolinones", Heterocycles, Vol. 29, No. 8, pgs. 1517-1528, 1989.			
	AAI	HARTMANN, Von Horst et al., "Darstellung und Charakterisierung 1,1-Disubstituierter Thioharnstoffe", Journal F. Prakt. Chemie., Band. 315, Heft. 1. pgs. 144-148, 1973.			
	AAJ	KODOMARI, Mitsuo et al., "One-Pot Synthesis of 2-Aminothiazoles Using Supported Reagents", Tetrahedron Letters, Vol. 43, pgs. 1717-1720, 2002.			
	AAK	KONNO, Shoetsu, et al., "Synthesis of 4,5-Diarylthiazole Derivatives as Blood Platelet Aggregation Inhibitors", Regular Articles, Vol. 110, No. 2, pgs. 105-114, 1990. (With Partial English Translation)			
	AAL	KROPP, Heinz et al., "Synthesis and Some Reactions of 4-Bromoimidazole-5-Sulfonyl Derivatives. A Reinvestigation", J. Chem. Eng. Data, Vol. 33, pgs. 537-538, 1988.			
	AAM	LIPINSKI, Christopher A. et al., "An Improved Preparation and Use of 2-Bromoacetoacetaldehyde in a New Synthesis of 2-Substituted -4-Acetylimidazoles", J. Org. Chem., Vol. 49, No. 3, pgs. 566-570, 1984.			
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	AAN	NAIR, V. et al., "Carsonine as a 2- $\pi$ Component in Its Cycloaddition with 1-Azirines", J.Org. Chem., Vol. 40, No. 9, pgs. 1348-1349, 1975.	
	AAO	LESLIE, Nick R. et al., "Phosphoinositide-Regulated Kinases and Phosphoinositide Phosphatases", Chem. Rev. Vol. 101, No. 8, pgs. 2365-2380, 2001.	
	AAP	OEHLER, Elisabeth et al., "(1,2-Epoxy-3-oxoalkyl)phosphonsaureester als Synthon Fuer Heterocyclische Carbonylverbindungen: Synthese von Acylsubstituierten Thiazolen, Indolizinen, Imidazo[1,2-a]Pyridinen und Imidazo[1,2-a]Pyrimidinen", Chem. Ber. Vol. 118, pgs. 4099-4130, 1985.	
	AAQ	CHAN, Ming Fai et al., "The Discovery and Structure-Activity Relationships of Nonpeptide, Low Molecular Weight Antagonists Selective for the Endothelin ET <sub>b</sub> Receptor <sup>1</sup> ", Bioorganic & Medicinal Chemistry, Vol. 6, pgs. 2301-2316, 1998.	
	AAR	RASMUSSEN, C.R. et al., "Improved Procedures for the Preparation of Cycloalkyl-, Arylalkyl-, and Arylthioureas <sup>1</sup> ", Papers Synthesis, pgs. 456-459, 1988.	
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	AAX		
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#### STATEMENT OF RELEVANCY

- 1) References AB - AF and AG have been cited in the International Search Report. A copy of these references is being submitted herewith.
- 2) References [REDACTED] have been cited in the corresponding [REDACTED] Search Report. A copy of these references is being submitted herewith.
- 3) References AH - AAR are discussed in the specification. A copy of these references is being submitted herewith.
- 4) References [REDACTED] are additional prior art known to Applicant. A copy of these references is being submitted herewith.